Luis Angel Guerrero Hoyos

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About Me

I am a Civil-Geological Engineer with 5+ years of experience in geospatial data, GIS and remote sensing. I hold a MSc degree in Civil Engineering from the University of Washington and a BSc degree in Geological Engineering from the Universidad Nacional de Colombia. I excel in both autonomous and team-based learning environments; with outstanding interpersonal, written, and communication skills. I am adaptable to change and committed to continuous improvement. My creative and innovative mindset is focused on problem-solving, particularly within the realms of geospatial data analysis and management. In addition to my academic and professional pursuits, I have a love for football, both as a player and a fan.

Skills

- **Tools:** QGIS, ArcGIS, Pix4D, CloudCompare, InSAR
- **Programming:** Python, GitHub, Matlab, VS Code, AI, Viktor
- **Frameworks & Libraries:** Arcpy, Geopandas, Shapely, Rasterio, Xarray, Gdal, Pdal, Cloudcompy, Dolphin, PyGMTSAR
- **Databases:** SQL, PowerBI
- **Soft Skills:** Problem-solving, adaptability, decision-making, communication, leadership, innovation, team player, relationships management

Experience

Staff Engineer (July 2025 - Present) — Shannon and Wilson Inc

- Contribute to the development of research tools for LiDAR change detection using ICP registration and M3C2 algorithms, and InSAR using Dolphin and PyGMTSAR, aimed at enhancing business opportunities in remote sensing.

Research Assistant and Scientist (August 2023 - June 2025) — University of Washington

- Investigate the geospatial relationships between earthquake-induced landslides and their reactivations, manipulating geospatial data types, both rasters (GeoTIFF: satellite imagery and lidar) and vectors (GeoJSON, geopackage, shapefile).

Monitoring Analyst (July 2021 - August 2023) — Hexagon Geospatial

- Perform InSAR and geospatial data analysis and real-time geotechnical monitoring of pit slopes and tailing dams using ground-based interferometric radars, robotic total stations, and GNSS, while providing technical support and delivering daily, weekly, and monthly reports on unstable areas for decision-making.

Geological Engineer (January 2019 - July 2021) — South32

- Manage and perform data entry of GIS databases for mineral resource estimation and decision-making, while planning and supervising drilling campaigns.

Research Assistant and Scientist (August 2017 - March 2018) — UNALMED

- Conduct photointerpretation, geotechnical mapping, and statistical modeling validation for landslide, debris flow, and flood hazard studies in Aburrá Valley, while proposing an early warning system for flash flows using RTI methodology.

Education

- Master of Science in Civil Engineering
  University of Washington
  June 2025
- Bachelor of Science in Geological Engineering
  Universidad Nacional de Colombia (UNALMED)
  May 2019

Awards & Certifications

- InSAR Processing and Analysis (ISCE+) - EarthScope Consortium & NSF, August 2024
- CEE Departmental Graduate Fellowship - University of Washington, September 2023
- InSAR and RAR Radar Monitoring - University of Arizona, December 2020

Languages

- English (Fluent)
- Spanish (Native)